

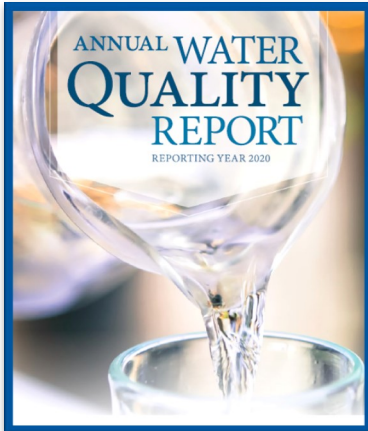


# Chesterfield County Department of Utilities



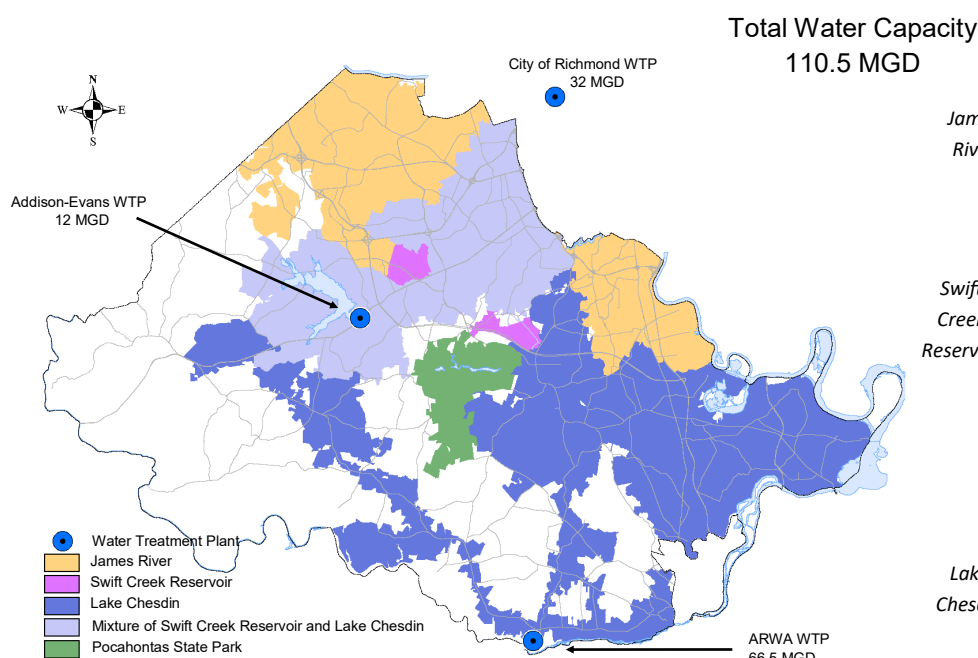
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## Fiscal Year 2021





# Chesterfield County Department of Utilities



James  
River



Swift  
Creek  
Reservoir



Lake  
Chesdin



Chesterfield County Department of Utilities' customers are fortunate because their water is supplied by three sources. The three sources that supply the county's potable water are the James River (top photo), Swift Creek Reservoir (middle photo), and Lake Chesdin (bottom photo). A total capacity of 110.5 million gallons of water per day, or MGD, is available. The map above outlines the county's water-service areas. The county is actively pursuing a fourth water supply as a resource for the next century.

The Chesterfield County Department of Utilities owns and operates the Addison-Evans Water Production and Laboratory Facility, which is located on Swift Creek Reservoir. This facility has a capacity of 12 MGD and produces approximately 16.1 percent of the county's water needs. The county is one of five members of the regional Appomattox River Water Authority, or ARWA, which is located on Lake Chesdin. The county has a daily allocation of 66.5 MGD from the authority and receives approximately 59.5 percent of a typical daily water demand from this source. The third water source is the James River, which supplies the city of Richmond's water treatment facility. The county's contract with the city ensures an available supply of 32 MGD. An average of 24.4 percent of the county's drinking water is provided by the James River.

## Water System Information Summary:

Miles of Water Lines: 2,068  
Water Storage Tanks: 24  
Total Water — Tank Capacity: 40.25 million gallons  
Water Pump Stations: 14  
Water — Active Services: 117,233  
Estimated Population Served: 336,600

## Water Sources:

James River (City of Richmond)  
Swift Creek Reservoir (Chesterfield County)  
Lake Chesdin (Appomattox River Water Authority)

## Water Plants:

### Addison-Evans Water Production and Laboratory Facility

Capacity 12 MGD  
Average Production 2.65 MGD

### Appomattox River Water Authority

Capacity 96 MGD  
Allocation 66.5 MGD  
Average Purchased 25.82 MGD

### City of Richmond

Allocation 32 MGD  
Average Purchased 9.75 MGD

**Total Capacity** 110.5 MGD

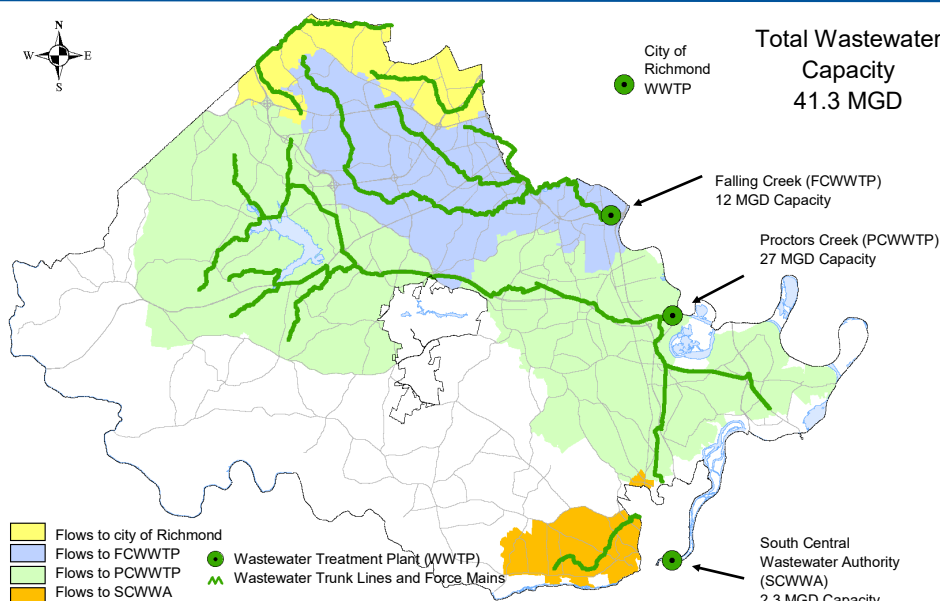
**Average Daily Flow** 38.22 MGD

All data listed in this brochure is reflective of June 30, 2021.





# Chesterfield County Department of Utilities



Maintaining water quality in the James River and Chesapeake Bay are vital to the social and economic future of Chesterfield County and Virginia. Chesterfield County has two wastewater treatment plants. The Falling Creek Wastewater Treatment Plant (top photo) and the Proctors Creek Wastewater Treatment Plant (bottom photo) play critical roles toward ensuring that wastewater is clean and safe when it is returned to the environment. The map above outlines the county's service areas and systems. Both wastewater treatment plants have received awards of recognition from the Environmental Protection Agency, the Virginia Department of Environmental Quality and the Virginia Water Environment Association. Both plants use state-of-the-art technology to remove pollutants from wastewater before it is returned to the James River. Serving as the county's first wastewater treatment facility, the Falling Creek Plant opened in 1965 with a treatment capacity of 3 MGD. Expansions and upgrades brought the plant to its current capacity of 12 MGD. In 1975, the Proctors Creek Plant opened to serve a significant portion of Chesterfield. With its expansions and upgrades, its current capacity is 27 MGD. With a total capacity of 39 MGD, these treatment plants can meet the county's needs well into the future. The county has a reciprocal agreement with the city of Richmond to treat wastewater flows from the northern portion of the county. Chesterfield also is a member of the South Central Wastewater Authority, or SCWWA, and has an allotted capacity of 2.3 MGD from the facility. This facility serves areas in southern Chesterfield.

## Protecting the Water Quality of the James River and Chesapeake Bay

Beginning in 2012, the Falling Creek Wastewater Treatment Plan started operating its biological-nutrient-removal facility. This ongoing treatment involves the use of advanced-treatment technologies that convert ammonia in wastewater to nitrogen gas and releases it harmlessly into the air. The Proctors Creek Wastewater Treatment Plant started full operation of the same nutrient-removal technologies in 2014. The investment in these projects has proven successful. This year, these plants removed approximately 2,699,831 pounds of nitrogen and 324,925 pounds of phosphorus thereby improving the water quality in the James River and Chesapeake Bay.

### Wastewater System Information Summary:

Miles of Wastewater Lines: 2,190  
Wastewater Pump Stations: 25  
Wastewater – Active Services: 99,998  
Estimated Population Served: 294,875

**Total Capacity:** 41.3 MGD

**Wastewater Treated:** 28.89 MGD

### Wastewater Plants:

#### Falling Creek Wastewater Treatment Plant

Capacity 12 MGD

#### Proctors Creek Wastewater Treatment Plant

Capacity 27 MGD

#### South Central Wastewater Treatment Plant

Capacity 2.3 MGD



# Chesterfield County Department of Utilities



George B. Hayes, P.E.  
Director

The Chesterfield County Department of Utilities is a public water and wastewater utility that operates as an enterprise fund. It is sustained by the revenue of the department and uses no tax revenue. It is operated and funded much like a private company. The main functions of the department are providing its customers with the highest quality drinking water while also protecting the James River and Chesapeake Bay by operating advanced wastewater-treatment facilities. The department uses state-of-the-art technology to deliver the highest quality products and services to its customers.

The department provides water service to more than 117,000 customers and wastewater service to almost 100,000 customers. It works with an annual operating budget of approximately 75.8 million, has 309 full-time positions, owns one water-treatment plant and two wastewater-treatment plants, and controls 24 water-storage tanks and 39 pump stations. The department is diligent about ensuring that water is safely and efficiently delivered to customers. Chesterfield County water consumers can be assured that the water they drink meets or exceeds all federal drinking-water standards. They also enjoy some of the lowest rates in the area. Due to the department's affordable rates and continuously solid financial position, the Chesterfield County Department of Utilities is one of only a handful of water and wastewater utilities in the nation to have achieved and maintained AAA ratings on its revenue bonds from each of the three top rating services. Financial stability, customer service, quality products and services, and workplace environment are the four key components that make up the department's strategic performance plan. Performance measures are established for every division of the department and are tracked monthly or annually with an annual overview. The performance plan (available on the department's webpage) is vital to the department's success. By consistently evaluating its processes and progress, the department continuously improves its tradition of excellence in customer service.

**Recognition and Achievements:** Progressive management and efficient department operations have allowed the department to become a recognized leader in Virginia as well as the nation. Following are examples illustrating some of the department's recent achievements:

**2016** —Received the Silver Medal in the Governor's Environmental Excellence Award Program.

**2016** —The Triple-AAA bond rating is affirmed by the top three rating agencies with issuance of 2016 revenue bonds to refinance all outstanding debt. The department first achieved its triple AAA rating in 2002 and has maintained it continually since then.

**2016** —The Water Distribution section was the first water distribution system in the state to receive E2 certification from DEQ.

**2017** —Received national recognition as a Utility of the Future Today for being forward-thinking, innovative, and for providing resilient and value-added service to its communities.

**2018** —The Addison-Evans Water Production and Laboratory Facility received the 20-Year Director's Award for maintaining partnership for safe drinking water program standards. The facility previously received the 10-Year and the 15-Year Director's Award and was the first utility in Virginia to be recognized by the U.S. Environmental Protection Agency for a safe drinking-water program.

**2019** —The department's wastewater treatment plants were reaffirmed as E3 facilities by DEQ and the water distribution system's certification was reaffirmed as E2.

**2019** —Received the Gold Award from the National Association of Clean Water Agencies. This was first received in 2018.

**2019** —Received the Sustainable Water Utility Award from the Association of Metropolitan Water Agencies. This award was first received in 2015.

**2020** —Received the National Association of Clean Water Agencies' Excellence in Management Recognition Platinum. This award was first received in 2014.

**2020** —Director George B. Hayes received the Al H. Paessler award from the Virginia Water Environment Association for his commitment to environmental stewardship and the wastewater industry.

**2021** —Received three awards from the National Association of Counties, or NACo. The department has received a total of 26 NACos for employee innovation and cost-savings ideas.